

WHAT IS CLAIMED IS:

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5 A communication system which has a plurality of  
communication apparatuses and performs communication on  
the basis of system identification information assigned to  
said communication system, comprising:

requesting means for requesting group communication  
in a group by forming the group of an arbitrary number of  
communication apparatuses in said communication system;

10 assigning means for assigning group identification  
information to manage the group communication in response  
to the request; and

communicating means for performing the group  
communication in the group on the basis of the group  
15 identification information assigned by said assigning  
means.

2. The system according to claim 1, wherein said  
communicating means performs multi-address calling in the  
20 group.

3. The system according to claim 1, further comprising  
a communication control apparatus having informing means  
for informing a communication apparatus, which has  
25 transmitted the request, of the group identification  
information.

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4. The system according to claim 1, wherein said communication apparatus inquires of other communication apparatuses whether the apparatuses participate in the group communication, and assigns the group identification information in accordance with responses.

5. The system according to claim 1, wherein said assigning means assigns the group identification information whenever the group communication is performed.

6. The system according to claim 1, wherein said assigning means releases the assigned group identification information when the group communication is complete.

7. The system according to claim 1, wherein said communicating means performs radio communication.

8. The system according to claim 7, wherein the radio communication is frequency hopping communication.

9. The system according to claim 8, further comprising a communication control apparatus for assigning a hopping pattern to each group.

10. The system according to claim 9, wherein said

communicating means performs the frequency hopping radio communication in synchronism with said communication control apparatus.

5 <sup>10</sup>~~11~~. The system according to claim <sup>7</sup>~~8~~, wherein information transmission right in the group communication is assigned to each communication apparatus at each frequency.

10 <sup>11</sup>~~12~~. The system according to claim <sup>7</sup>~~8~~, wherein said communicating means performs communication by using a communication frame for communicating information, and

information transmission right in the group communication is assigned to each communication apparatus in accordance with a time during which one communication frame is communicated.

15 <sup>12</sup>~~13~~. The system according to claim 1, wherein the group communication is performed on the basis of accounting information.

20 <sup>13</sup>~~14~~. A communication apparatus which performs communication on the basis of system identification information assigned to a communication system having a plurality of communication apparatuses, comprising: requesting means for requesting group communication

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in a group by forming the group of an arbitrary number of communication apparatuses in said communication system;

5 assigning means for assigning group identification information to manage the group communication in response to the request; and

communicating means for performing the group communication in the group on the basis of the group identification information assigned by said assigning means.

10 <sup>14</sup>  
~~15~~. The apparatus according to claim <sup>13</sup>~~14~~, wherein said communicating means performs multi-address calling in the group.

15 <sup>15</sup>  
~~16~~. The apparatus according to claim <sup>13</sup>~~14~~, where said communication system comprises a communication control apparatus having informing means for informing a communication apparatus, which has transmitted the request, of the group identification information.

20 <sup>16</sup>  
~~17~~. The apparatus according to claim <sup>13</sup>~~14~~, wherein said communication apparatus inquires of other communication apparatuses whether the apparatuses participate in the group communication, and assigns the group identification  
25 information in accordance with responses.

18. The apparatus according to claim 14, wherein said assigning means assigns the group identification information whenever the group communication is performed.

5 <sup>17</sup>~~19~~. The apparatus according to claim <sup>13</sup>~~14~~, wherein said assigning means releases the assigned group identification information when the group communication is complete.

10 <sup>18</sup>~~20~~. The apparatus according to claim <sup>13</sup>~~14~~, wherein said communicating means performs radio communication.

<sup>19</sup>~~21~~. The apparatus according to claim <sup>18</sup>~~20~~, wherein the radio communication is frequency hopping communication.

15 <sup>20</sup>~~22~~. The apparatus according to claim <sup>19</sup>~~21~~, wherein said communication system comprises a communication control apparatus for assigning a hopping pattern to each group and, said communicating means performs communication on the basis of the hopping pattern assigned by said  
20 communication control apparatus.

<sup>21</sup>~~23~~. The apparatus according to claim <sup>20</sup>~~22~~, wherein said communicating means performs the frequency hopping radio communication in synchronism with said communication  
25 control apparatus.

<sup>22</sup>  
~~24~~. The apparatus according to claim <sup>19</sup>~~21~~, wherein information transmission right in the group communication is assigned to each communication apparatus at each frequency.

<sup>5</sup>      <sup>23</sup>    <sup>19</sup>

~~25.~~ The apparatus according to claim ~~21~~, wherein

said communicating means performs communication by

using a communication frame for communicating information,

and

10 information transmission right in the group  
communication is assigned to each communication apparatus  
in accordance with a time during which one communication  
frame is communicated.

15 <sup>24</sup>~~26~~. The apparatus according to claim <sup>13</sup>~~14~~, wherein the group communication is performed on the basis of accounting information.

Sub 27. A method of controlling a communication system which  
has a plurality of communication apparatuses and performs  
communication on the basis of system identification  
information assigned to said communication system,  
comprising the step of:

requesting group communication in a group by forming  
25 the group of an arbitrary number of communication  
apparatuses in said communication system;

by using a communication frame for communicating  
information, and

information transmission right in the group  
communication is assigned to each communication apparatus  
5 in accordance with a time during which one communication  
frame is communicated.

52. The method according to claim 40, wherein the group  
communication is performed on the basis of accounting  
10 information.

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~~53.~~ A computer program product comprising a computer  
usable medium having computer readable program code means  
for performing communication on the basis of system  
15 identification information assigned to a communication  
system having a plurality of communication apparatuses,  
said computer readable program code means including:

first computer readable program code means for  
requesting group communication in a group by forming the  
20 group of an arbitrary number of communication apparatuses  
in said communication system;

second computer readable program code means for  
assigning group identification information to manage the  
group communication in response to the request; and

25 third computer readable program code means for  
performing the group communication in the group on the basis

of the assigned group identification information.

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5 assigning group identification information to manage  
the group communication in response to the request; and  
performing the group communication in the group on the  
basis of the group identification information assigned in  
the assignment step.

10 28. The method according to claim 27, wherein the group  
communication step comprises performing multi-address  
calling in the group.

15 29. The method according to claim 27, wherein said  
communication system comprises a communication control  
apparatus having the information step of informing a  
communication apparatus, which has transmitted the request,  
of the group identification information.

20 30. The method according to claim 27, wherein said  
communication apparatus inquires of other communication  
apparatuses whether the apparatuses participate in the  
group communication, and assigns the group identification  
information in accordance with responses.

25 31. The method according to claim 27, wherein the  
assignment step comprises assigning the group  
identification information whenever the group  
communication is performed.

32. The method according to claim 27, wherein the assignment step comprises releasing the assigned group identification information when the group communication is  
5 complete.

33. The method according to claim 27, wherein the group communication step comprises performing radio  
10 communication.

34. The method according to claim 33, wherein the radio communication is frequency hopping communication.

35. The method according to claim 34, wherein said  
15 communication system comprises a communication control apparatus for assigning a hopping pattern to each group.

36. The method according to claim 35, wherein the group communication step comprises performing the frequency  
20 hopping radio communication in synchronism with said communication control apparatus.

37. The method according to claim 34, wherein information transmission right in the group communication is assigned  
25 to each communication apparatus at each frequency.

38. The method according to claim 34, wherein  
the group communication step comprises performing  
communication by using a communication frame-for  
communicating information, and

5 information transmission right in the group communication is assigned to each communication apparatus in accordance with a time during which one communication frame is communicated.

10 39. The method according to claim 27, wherein the group communication is performed on the basis of accounting information.

15 A method of controlling a communication apparatus which performs communication on the basis of system identification information assigned to a communication system having a plurality of communication apparatuses, comprising:

requesting group communication in a group by forming  
20 the group of an arbitrary number of communication  
apparatuses in said communication system;

assigning group identification information to manage the group communication in response to the request; and

performing the group communication in the group on the  
25 basis of the group identification information assigned in  
the assignment step.

41. The method according to claim 40, wherein the group communication step comprises performing multi-address calling in the group.

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42. The method according to claim 40, wherein said communication system comprises a communication control apparatus having the information step of informing a communication apparatus, which has transmitted the request,  
10 of the group identification information.

43. The method according to claim 40, wherein said communication apparatus inquires of other communication apparatuses whether the apparatuses participate in the  
15 group communication, and assigns the group identification information in accordance with responses.

44. The method according to claim 40, wherein the assignment step comprises assigning the group  
20 identification information whenever the group communication is performed.

45. The method according to claim 40, wherein the assignment step comprises releasing the assigned group  
25 identification information when the group communication is complete.

46. The method according to claim 40, wherein the group communication step comprises performing radio communication.

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47. The method according to claim 46, wherein the radio communication is frequency hopping communication.

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48. The method according to claim 47, wherein said communication system comprises a communication control apparatus for assigning a hopping pattern to each group and the group communication step comprises performing communication on the basis of the hopping pattern assigned by said communication control apparatus.

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49. The method according to claim 47, wherein the group communication step performs the frequency hopping radio communication in synchronism with said communication control apparatus.

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50. The method according to claim 47, wherein information transmission right in the group communication is assigned to each communication apparatus at each frequency.

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51. The method according to claim 47, wherein the group communication step performs communication